In re Appl. Ser. No. 10/520,145   Atty. Dkt: MOSSAKOWSKI=1
Amendment dated: July 31, 2008
In response to OA: May 1, 2008

REMARKS

Claims 1-20 are pending in the application. The Office Action and cited references have been considered. Favorable reconsideration is respectfully requested.

Claims 1-5, 7, 9, 11, 12, 18, and 19 were rejected under 35 U.S.C. § 102(b) as being anticipated by Castor et al. (U.S. Patent No. 6,246,797). Claims 6, 13, 14, and 20 were rejected under 35 U.S.C. §103 as being unpatentable over Castor in view of Zandi et al. (U.S. Patent No. 5,748,786). Claim 8 was rejected under 35 U.S.C. §103 as being unpatentable over Castor in view of Milsted et al. (U.S. Patent No. 6,263,313). Claim 10 was rejected under 35 U.S.C. §103 as being unpatentable over Castor in view of Atsumi et al. (U.S. Patent No. 6,801,665). Claims 15 and 16 were rejected under 35 U.S.C. §103 as being unpatentable over Castor and Zandi and further in view of Milsted et al. Claim 17 was rejected under 35 U.S.C. §103 as being unpatentable over Castor and Zandi and further in view of Atsumi. These rejections are respectfully traversed for the following reasons.

Claim 1 recites a method for managing storage space in a storage medium of digital terminal equipment for data storage of images according to a prioritized pixel transmission method. Each image is stored in a data file that consists of an array of individual image pixels. Each pixel has a pixel value that describes the color or brightness information of the pixel. The method comprises the steps of determining a priority value for each pixel of the array by calculating a pixel difference value based on the given pixel value of the pixel in relation to the pixel values of a previously selected group of neighboring pixels, the priority values indicating the

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relative importance of the respective pixels to the image, grouping the pixels that are used for calculating the priority value into a pixel group, sorting pixel groups of the image array based on their priority values, saving multiple data files with pixel groups sorted by priority (P1, P2, ...,Pn) on the storage medium, selecting a lower priority threshold value (Pu) and an upper priority threshold value (Po), wherein the priority threshold values indirectly indicate how much information content of a file is stored on the storage medium, the lower priority threshold means that a greater number of pixel groups are available for reconstruction of the image, and the upper priority threshold means that a fewer number of pixel groups are available for reconstruction of the image, storing files in the form of their pixel groups having priority values between the highest priority (P1) and a priority corresponding to the selected lower priority threshold value (Pu) until the available storage space of the storage medium has been filled, increasing the lower priority threshold value (Pu) by one priority level, deleting pixel groups with a lower priority than that of the current priority threshold value (Pu) on the storage medium when additional storage space is needed on the storage medium to create freed storage space, and using the freed storage space in the storage medium for storing further data. This is not taught, disclosed or made obvious by the prior art of record.

      Applicant has amended claim 1 to positively recite the steps of calculating the priority values, and the other limitations previously inferentially recited in the preamble. Applicant notes that the Office Action does not explain where in the cited references the limitations previously recited in the preamble, and referred to in the body of the claim, and now explicitly recited in the claim body, are found. Applicant

respectfully submits that this amendment does not raise new issues, because the claim previously included those limitations, albeit inferentially by reference in the body of the claim to terms used in the preamble. Applicant further submits that the prior art does not teach determining priority values for each pixel of the array by calculating a pixel difference value based on the given pixel value of the pixel in relation to the pixel values of a previously selected group of neighboring pixels, the priority values indicating the relative importance of the respective pixels to the image, grouping the pixels that are used for calculating the priority value into a pixel group, sorting pixel groups of the image array based on their priority values, saving multiple data files with pixel groups sorted by priority (P1, P2, ...,Pn) on the storage medium.

The Examiner refers to Figure 5 of Castor in connection with col. 11, line 48, in response to Applicant's remarks. In that section, and elsewhere, Castor teaches that pictures may be stored in different qualities, *i.e.*, High quality, Very Good+, Very Good-, and Good. The higher the quality level of a picture, the higher is the number of pixels and the required storage space.

However, Applicant respectfully submits that the priority values assigned to pixel groups of a picture as recited in claim 1 have nothing to do with the picture quality taught be Castor. According to the present invention, there is no relation between the priority of a pixel group and the picture quality of a picture containing this group. In fact, the picture quality according to the present invention is related to the *number* of available (stored) pixel groups with high priority.

Castor does not include any reference to "priority" or an expression with an equivalent meaning to that recited in claim 1. There is no reference in Castor to combine pixels of a picture to defined pixel groups and to assign priorities to these pixel groups depending on certain characteristics of these pixel groups.

Furthermore, as discussed in the previous response, Castor discloses an image processing system for storing files in a memory device at a number of incremental quality levels. The image quality in Applicant's invention corresponds to the number of pixel groups stored in the image file - the more pixel groups there are, the higher the quality of the image. The number of pixel groups to be stored is selected on the basis of a priority threshold value. This is reflected the preamble of claim 1: "wherein each image is stored in a data file that consists of an array of individual image pixels, wherein each pixel has a pixel value that describes the color or brightness information of the pixel" and in the body, which recites, *inter alia*, "determining a priority value for each pixel of the array is determined by calculating a pixel difference value based on the given pixel value of the pixel in relation to the pixel values of a previously selected group of neighboring pixels, the priority values indicating the relative importance of the respective pixels to the image, grouping the pixels that are used for calculating the priority value into a pixel group, sorting pixel groups of the image array based on their priority values, and saving multiple data files with pixel groups by priority (P1, P2, ...,Pn) to the storage medium,", and "selecting a lower priority threshold value (Pu) and an upper priority threshold value (Po), wherein the priority threshold values indirectly indicate how much information content of a file is stored on the storage medium, the

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lower priority threshold means that a greater number of pixel groups are available for reconstruction of the image, and the upper priority threshold means that a fewer number of pixel groups are available for reconstruction of the image. . . ."

Castor discloses a method for managing storing space in a storage medium by reducing the image quality level, thus saving storage capacity. According to Castor, at for example, col. 9, lines 38 *et seq.*, the image quality levels can be reduced by deleting from the image file all analysis arrays associated with one or more transform layers, or by deleting from the image file one or more bit planes of data (see e.g., col. 10, lines 11-14). In the first case, the image data is transformed from a higher quality level to a lower quality level by using a so-called wavelet transform that is based on a Fourier Transform of the image data. The creation of the analysis arrays is described with respect to Fig. 4A. In the second case, simply the lower bit planes of the image data are deleted. This creates image data that is more "granular" and thus smaller in size requiring less storage space. The concept of bit planes is described, e.g., in col. 7, lines 1-25, and col. 8, lines 1-8.

There is no teaching or suggestion in Castor for assigning priorities to pixel groups of the image data and selecting the image quality by a selection of pixel groups having a priority between a highest selected priority level and a preset lowest priority threshold level as recited in claim 1.

For at least these reasons, Applicant respectfully submits that claim 1 is patentable over the prior art of record. None of the other references remedy the deficiencies of Castor noted above with respect to claim 1. Accordingly, Applicant

respectfully submits that claims 2-20 are patentable in and of themselves and as they depend from and include the limitations of claim 1, which is patentable for the reasons discussed above.

        In view of the above amendment and remarks, Applicant respectfully requests entry of the proposed amendment and reconsideration and withdrawal of the outstanding rejections of record. Applicant submits that upon entry of the amendment, the application will be in condition for allowance and early notice to the effect is most earnestly solicited.

        If the Examiner has any questions, he is invited to contact the undersigned at 202-628-5197.

Respectfully submitted,

BROWDY AND NEIMARK, P.L.L.C.
Attorneys for Applicant(s)

By   /Ronni S. Jillions/
     Ronni S. Jillions
     Registration No. 31,979

RSJ:me
Telephone No.: (202) 628-5197
Facsimile No.: (202) 737-3528
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